

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 21-38 are pending, Claims 1-20 having been previously canceled without prejudice or disclaimer and 21, 22, 30, and 31 having been amended by way of the present amendment.

In the outstanding Office Action, Claims 20, 29, 30 and 38 were rejected as being anticipated by Cerwall et al (U.S. Patent No. 6,868,277, hereinafter Cerwall); Claims 22-28 and 31-37 were rejected as being patentable over Cerwall in view of Bhatia (U.S. Patent No. 6,112,101).

Before turning to the prior art rejections, a brief review of aspects of the present invention is in order. As discussed at page 6, line 23, to page 7, line 3 (referring to Figure 2), and page 11, lines 9-28 (referring to steps S1-S3 in Figure 4), in a resource allocation control process according to the present invention, the base station detects use-state information of radio resources in the cell site of the base station of concern and in respective cell sites of neighboring base stations and priority information of mobile stations using the same radio resource of both the base station of concern and the neighboring base stations by accessing an external radio resource management table. In this situation, the base station determines whether an up/down link direction related to the non-allocated radio resource is the same as an up-down link direction related to an allocated radio resource and one of the cell sites of the neighboring base stations (step S5).

When the up/down link direction is not the same, the possibility of radio resource interference in the case of allocation of the same radio resource to the link between the base station and requesting mobile station is taken into account, and the base station determines

whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations using the radio resources allocated (step S6).

When the level of priority of the requesting base station is higher, the base station determines whether allocation of the non-allocated radio resource in the cell site of the base station of concern to the link is possible (step S7). Moreover, even when the link data transmission direction is not the same, the severity level of radio resource interference is considered low and the non-allocated radio resource is allocated to the link if the level of priority of the requesting mobile station is high and the allocation of the non-allocated radio resource is possible.

Accordingly, the new radio resource is allocated to the link based on both the use-state information and the priority information detected by the detecting step and based on a result of the determination steps described above.

Claim 21 is directed to a resource allocation method and includes the steps of detecting use-state information of radio resources ... determining whether an up/down link direction related to a non-allocated radio resource in the cell site of the base station of concern is the same as an up-down link direction related to an allocated radio resource in one of the cell sites of the neighboring base stations. The base station then allocates new radio resources to the link between the base station of concern and the requesting mobile station based on (1) the use-state information and priority information as previously detected, and (2) a result of the determination made in the determining step.

Cerwall describes a system in which the radio quality on candidate radio channels is measured and the interference effects of establishing a radio connection on the candidate radio channels on the already existing radio connections is estimated. Using the measured results and estimates, it is determined which radio channel, if any, is allocated to the mobile station. However, Cerwall does not perform the radio resource allocation by taking into

account up links or down links of the radio resources in the cell site of the base station of concern and the cell sites of the neighboring stations as claimed. Therefore, Cerwall would not avoid or minimize the undesired influence of potential interference on the mobile communications. As Cerwall does not teach or suggest the detecting step, determining step, or allocating step as presently claimed in amended Claim 21, it is respectfully submitted that amended Claim 21 patentably defines over Cerwall. For substantially the same reasons, it is respectfully submitted that Claims 29, 30 and 38 also patentable define over Cerwall.

Claims 22-28 and 31-37 stand rejected as being unpatentable over Cerwall in view of Bhatia. Bhatia is asserted for its disclosure of causing the base station to determine whether a level of priority of the requesting mobile station is higher than a level of priority of each of the mobile stations using radio resources allocated. The outstanding Office Action refers to column 2, lines 38-64 which explains that the load based priority provides a cellular service provider with a way to differentiate the service, and the cellular service provider can therefore sell low cost subscriptions for the low priority subscribers.

However, even if this is the case, Bhatia does not cure the deficiencies with regard to the independent claims discussed above that were absent in Cerwall. Accordingly, no matter how Cerwall and Bhatia are combined, the combination neither teaches or suggests all of the elements of Claims 22-28 and 31-37.

Consequently, in view of the present amendment and in light of the foregoing comments, it is respectfully submitted that the invention defined by Claims 21-38 patentably

define over the asserted prior art. The present application is therefore believed to be in condition for formal allowance and an early and favorable reconsideration of this application is therefore requested.


Respectfully submitted,

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